

PRODUCT DATASHEET

ES-HG-S07-F14-R120

Precision Transmission Component

Hat Harmonic Gearboxes | High-Torque Hat Unit Type I

Product Overview

Precision Transmission Component with reduction Ratio 120, frame Size 14 and angular Transmission Accuracy 1.5 arcmin.

Key Specifications

PARAMETER	VALUE	UNIT
Reduction Ratio	120	
Frame Size	14	
Angular Transmission Accuracy	1.5	arcmin
Wave Generator Dimension T	9.4+0.10 / 7+0.10	mm
Wave Generator Bore U	ϕ8H7 / ϕ6H7	
Wave Generator Keyway W	2JS9/P9 / 3JS9/P9	
Hysteresis Loss	1	arcmin
Torsional Rigidity K1	0.47	×10 ⁴ Nm/rad
Torsional Rigidity K2	0.61	×10 ⁴ Nm/rad

Technical Specifications

PARAMETER	SPECIFICATION	UNIT	NOTES
PERFORMANCE			
Angular Transmission Accuracy	1.5	arcmin	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Hysteresis Loss	1	arcmin	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
MECHANICAL			
Frame Size	14		Frame Size: 14; Reduction Ratio: 120; Size: 14
Wave Generator Dimension T	9.4+0.10 / 7+0.10	mm	Frame Size: 14; Option Index: 1; Option Label: Wave generator - A ϕ 8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 14; Option Label: Wave generator - A ϕ 6; Reduction Ratio: 120; Wave Generator Option: wave-generator-39713db786bd
Wave Generator Bore U	ϕ 8H7 / ϕ 6H7		Frame Size: 14; Option Index: 1; Option Label: Wave generator - A ϕ 8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3 / Frame Size: 14; Option Label: Wave generator - A ϕ 6; Reduction Ratio: 120; Wave Generator Option: wave-generator-39713db786bd
Wave Generator Keyway W	2JS9/P9 / 3JS9/P9		Frame Size: 14; Option Label: Wave generator - A ϕ 6; Reduction Ratio: 120; Wave Generator Option: wave-generator-39713db786bd / Frame Size: 14; Option Index: 1; Option Label: Wave generator - A ϕ 8; Reduction Ratio: 120; Wave Generator Option: wave-generator-e6e55a341aa3
ADDITIONAL SPECIFICATIONS			
Reduction Ratio	120		Frame Size: 14; Reduction Ratio: 120; Size: 14
Torsional Rigidity K2	0.61	$\times 10^4$ Nm/rad	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity K1	0.47	$\times 10^4$ Nm/rad	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity K3	0.71	$\times 10^4$ Nm/rad	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity T2	6.9	Nm	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14
Torsional Rigidity T1	2	Nm	Frame Size: 14; Reduction Ratio: 120; Reduction Ratio Min: 50; Size: 14

Dimensional & Integration Overview

Mechanical Overview

PARAMETER	VALUE	UNIT
Frame Size	14	
Wave Generator Dimension T	9.4+0.10 / 7+0.10	mm
Wave Generator Bore U	φ8H7 / φ6H7	
Wave Generator Keyway W	2JS9/P9 / 3JS9/P9	

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.